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DEVELOPMENTS SINCE THE FOURTH REVIEW CONFERENCE OF THE PARTIES TO THE TREATY ON THE NON-PROLIFERATION OF NUCLEAR WEAPONS RELATING TO ARTICLE VI OF THE TREATY

Background paper by the Secretariat

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I. INTRODUCTION

1. At its second session (17-21 January 1994), the Preparatory Committee for the 1995 Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, invited the Secretary-General to prepare for the Committee's third session (12-16 September) a background paper on the overall implementation of article VI of the Treaty. 1/ The paper "should cover developments regarding cessation of the nuclear arms race, nuclear disarmament and general and complete disarmament". The present paper is submitted in response to that request. As separate papers have been prepared on the issues of a comprehensive nuclear-test ban (NPT/CONF.1995/PC.III/2), nuclear-weapon-free zones (NPT/CONF.1995/PC.III/5) and security assurances for non-nuclear-weapon States (NPT/CONF.1995/PC.III/6), those questions are not dealt with in the present paper.

II. BACKGROUND

2. The Charter of the United Nations envisages arms regulation and disarmament as elements in the progressive establishment of an international security system. The impact of the discovery of nuclear energy, however, gave significant additional emphasis to disarmament, and in particular to nuclear disarmament. Since its foundation, the United Nations has dealt with the increasingly complex issues of arms limitation and disarmament as one of the priority issues in international relations. The need for and the basic objectives of disarmament have remained constant throughout the years, but the approaches to the subject and the scope of deliberations have changed as a reflection of varying political realities and international conditions.

3. At the very outset, the approach pursued was quite broad. Throughout the 1950s the objective was the regulation, limitation and balanced reduction of all armed forces and armaments in a coordinated, comprehensive programme. In 1959, the concept of general and complete disarmament was first introduced and included in the agenda of the General Assembly as a separate item. In the early 1960s, specific plans to achieve general and complete disarmament were submitted by the United States of America and the Union of Soviet Socialist Republics. However, with little progress towards agreement on such a programme, starting in the late 1950s impetus was being given to a "partial approach". It was felt that the achievement of some first, limited steps would increase confidence and create a more favourable atmosphere for comprehensive agreements. Devoting parallel and, at times, even primary attention to "collateral" measures, it was hoped, would facilitate the complex task of achieving general and complete disarmament. By the mid-1960s, it became widely accepted, however, that general and complete disarmament was not attainable in any short or specific period. Since then, it has been tacitly accepted that general and complete disarmament should be regarded as the ultimate goal, with an increasing concentration on partial objectives.

4. A new comprehensive disarmament strategy was developed in the late 1970s. At the initiative of the non-aligned countries which sought to give new impetus to multilateral disarmament efforts, the General Assembly in 1978 held its first special session devoted to disarmament. The Final Document of the session,

General Assembly resolution S-10/2, adopted by consensus, set out a new strategy comprising agreed goals, principles and priorities in arms limitation and disarmament as well as a programme of action leading towards the realization of the ultimate objective of general and complete disarmament. It also specified measures intended to strengthen the multilateral machinery that deals with disarmament issues within the United Nations system. Again in 1982 and 1988, the Assembly met in special sessions devoted to disarmament. At both sessions, however, the Assembly was unable to reach agreement on the implementation of the programme of action. Therefore, efforts have continued to find ways of advancing the comprehensive programme of disarmament and of achieving specific measures of arms limitation, disarmament and confidence-building.

5. In the past several decades, a wide variety of ideas and initiatives were put forward in the field of disarmament, particularly nuclear disarmament, both within and outside the framework of the United Nations. By and large they reflected the perceptions of their proponents of what constituted the main challenges to international peace and security and were designed to cope with them accordingly, either as integral parts of the comprehensive approach or as "partial" measures on their own. These perceptions as a rule reflected the military-strategic thinking and doctrines of the major alliances and political groups, including some individual States not belonging to these groups. For instance, the non-aligned countries were largely concerned with the perceived dangers stemming from the existence of nuclear weapons and the nuclear arms race. Members of the Warsaw Treaty Organization (WTO) underlined the issue of nuclear disarmament and called for a range of measures in that field. Members of the North Atlantic Treaty Organization (NATO, on the other hand, in advocating various disarmament measures, stressed the need to maintain the overall military balance and stability in international relations through credible deterrence.

6. Reflecting this wide spectrum of positions, the disarmament agenda of the international community contained a broad range of diverse and often contentious specific measures. Most of them dealt with various aspects of nuclear weapons. They included general proposals such as those for the prohibition of nuclear weapons; the cessation of the nuclear arms race and nuclear disarmament; the cessation of the qualitative improvement and development of nuclear weapons and of their production; a comprehensive programme for the phased reduction of nuclear weapons leading to their complete elimination; a "nuclear freeze"; and the concept of "nuclear suffocation". Other proposals made ranged from calls for a general prohibition of the use or threat of use of nuclear weapons to a prohibition of their first use and the prohibition of certain specific types of nuclear weapons. Over the years, much prominence was given to the prohibition of all tests of nuclear weapons. The question of giving security guarantees to non-nuclear-weapon States, against the use or threat of use of nuclear weapons, was the subject of continuing discussion.

7. Apart from the question of reducing the threat posed by nuclear weapons, the international community also made great efforts to deal with other weapons of mass destruction. In the first place, there were various proposals related to banning the use of chemical weapons and calls for their global and comprehensive prohibition. Further areas of concern related to biological weapons, new types of weapons of mass destruction, radiological weapons,

limitation and reduction of conventional weapons and international arms transfers, the prevention of an arms race in outer space, curbing the naval arms race, naval armaments and disarmament, and reduction of military budgets.

8. Although few proposals led to the initiation of actual negotiations and to concrete agreements, such agreements as were concluded commit Governments involved to a number of highly significant arms limitation and disarmament measures.

9. In the nuclear field, among the most important multilateral agreements achieved were the Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and under Water (Partial Test-Ban Treaty) of 1963 and the Treaty on the Non-Proliferation of Nuclear Weapons (Non-Proliferation Treaty) of 1968. On the regional level, the Antarctic Treaty of 1959, the Treaty for the Prohibition of Nuclear Weapons in Latin America and the Caribbean (Treaty of Tlatelolco) of 1967 and the South Pacific Nuclear Free Zone Treaty (Treaty of Rarotonga) of 1985 kept large areas of the globe free of nuclear weapons. In addition, a number of bilateral treaties were concluded between the United States and the then Soviet Union. These comprise the Treaty between the United States of America and the Union of Soviet Socialist Republics on the Limitation of Anti-Ballistic Missile Systems (ABM Treaty) and the Interim Agreement between the United States of America and the Union of Soviet Socialist Republics on Certain Measures with respect to the Limitation of Strategic Offensive Arms (SALT I) of 1972; the Agreement on the Prevention of Nuclear War of 1973; the Treaty between the United States of America and the Union of Soviet Socialist Republics on the Limitation of Underground Nuclear-Weapon Tests (Threshold Test-Ban Treaty) of 1974; the Treaty on Underground Explosions for Peaceful Purposes (PNE Treaty) of 1976; the Treaty between the United States of America and the Union of Soviet Socialist Republics on the Limitation of Strategic Offensive Arms (SALT II) of 1979; the Agreement on the Establishment of Nuclear Risk Reduction Centres of 1987; the Treaty between the United States of America and the Union of Soviet Socialist Republics on the Elimination of Their Intermediate-Range and Shorter-Range Missiles (INF Treaty) of 1987; and the Agreement on Notification of Launches of Intercontinental Ballistic Missiles and Submarine-launched Ballistic Missiles of 1988.

10. Several agreements were concluded with respect to weapons of mass destruction in general, the demilitarization/denuclearization of some areas as well as specific activities affecting the environment. Among multilateral measures agreed upon were the Treaty Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies (Outer Space Treaty) of 1967; the Treaty on the Prohibition of the Emplacement of Nuclear Weapons and Other Weapons of Mass Destruction on the Seabed and the Ocean Floor and the Subsoil Thereof (Seabed Treaty) of 1971; the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction (BW Convention) of 1972; the Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques (ENMOD Convention) of 1977; and the Agreement Governing the Activities of States on the Moon and Other Celestial Bodies (Agreement on Celestial Bodies) of 1979.

11. In the area of conventional weapons the only agreement achieved at the global level was the Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to Be Excessively Injurious or to Have Indiscriminate Effects (Inhumane Weapons Convention) of 1981. On the regional level progress was achieved, specifically in Europe, with the adoption of the Helsinki confidence-building measures in 1975, the Stockholm Document in 1986, the Treaty on Conventional Armed Forces in Europe (the CFE Treaty) in 1990 and the Vienna Document on confidence-building measures in 1990. In 1974, several States from the region of Latin America by adopting the Declaration of Ayacucho committed themselves to creating conditions conducive to effective arms limitation and to stop the acquisition of arms for aggressive ends. The principles were confirmed in 1978.

III. ARMS LIMITATION AND DISARMAMENT EFFORTS SINCE THE FOURTH REVIEW CONFERENCE

12. During the period under review, arms limitation and disarmament efforts were pursued in a greatly altered international environment marked by distinctively contradictory trends. With the dissolution of the Soviet Union and profound political changes in Eastern Europe, more than four decades of adverse ideological and military competition between East and West came to an end, creating unprecedented opportunities for substantive progress in the field of disarmament. The end of the cold war, however, has by no means removed the risk of armed conflict in a world newly characterized by potential regional arms races and the accumulation of ever more destructive weaponry by a growing number of countries. Regional instabilities, the emergence of ethnic and religious tensions and the continuing and heightened risk of proliferation of both weapons of mass destruction and conventional weapons have now created a serious challenge to international stability. This has rendered disarmament a more urgent and necessary element of the system of international peace and security than ever.

13. While substantial progress towards disarmament has been made on various long-standing issues since the end of the cold-war era, particularly with regard to the reductions of nuclear weapons and the prohibition and destruction of chemical weapons, new disarmament issues have been gaining prominence at the same time. Among them are the need to exchange objective information on military matters; transparency of military expenditures and the limitations on arms transfer; conversion and the safe and cost-effective destruction of weapons. The question of verification of compliance with the wide range of agreements has taken on many new aspects.

A. Measures and initiatives relating to cessation of the nuclear arms race and to nuclear disarmament

1. Multilateral

Non-use of nuclear weapons and the prevention of nuclear war

14. The recent changes in international relations, particularly between the two major nuclear-weapon States, have considerably diminished the likelihood of a global nuclear war. Nevertheless, the issue of non-use of nuclear weapons and the prevention of nuclear war continued to be debated within various forums, both within and outside the United Nations framework. The difference in positions between various political groups and individual States remained evident, however. In the General Assembly, for instance, this was reflected from the forty-fifth to the forty-eighth sessions in the voting pattern on a resolution entitled "Convention on the Prohibition of the Use of Nuclear Weapons", which was initiated annually by India. 2/ The Disarmament Commission has also debated the issue for some years, but since no agreement could be reached, it decided in 1991 not to continue its consideration of the subject.

15. The Conference on Disarmament also discussed the issue under the item "Prevention of nuclear war, including all related matters" in formal and informal meetings. Proposals were made, inter alia, for an action programme for the prevention of accidental nuclear war; the adoption of a code of peaceful conduct of nations in international affairs; the establishment of nuclear alert and crisis reduction centres and of early warning stations; international machinery for preventing accidental use of nuclear weapons; and an international agreement banning the first use of nuclear weapons. Each year consultations were held to consider an appropriate organizational arrangement to deal with the item, including proposals for the establishment of a subsidiary body, but no agreement could be reached.

Nuclear disarmament

16. The General Assembly has adopted annually resolutions on various aspects of nuclear arms limitation and disarmament. On many of them the divergence of views, as before, continued to stand in the way of any progress. Some of the traditional initiatives, most notably the proposal for a nuclear freeze, have been overtaken by the dynamics of the nuclear disarmament process and were not pursued further. On the other hand, consensus has begun to emerge on some other issues, most notably the nuclear-test ban and the cut-off of fissile material. While many resolutions have continued to underline the special responsibility of the two major Powers for nuclear disarmament, they have also urged the Conference on Disarmament to begin multilateral negotiations on a number of specific measures in this field.

17. Since 1992 the Disarmament Commission has been engaged in the discussion of the process of nuclear disarmament in the framework of international peace and security, with the objective of the elimination of nuclear weapons. The discussions have focused on a general outline for guidelines and recommendations for nuclear disarmament proposed by the Chairman. During the deliberations, the vital importance and urgency of disarmament in general and of nuclear

disarmament in particular, with a view to achieving the ultimate goal of the elimination of nuclear weapons, were reaffirmed by many delegations as equally relevant in the new political and security environment. Although the Commission was to conclude its deliberation on this item in 1994, it was not able to finish its work and recommended that consideration of the item be continued with a view to finalizing it in 1995.

18. Several items on the agenda of the Conference on Disarmament deal with nuclear weapons-related issues as well. A wide range of topics has been discussed under the agenda item entitled "Cessation of the nuclear arms race and nuclear disarmament". These topics have included the questions of: the cessation of production of nuclear weapons and their delivery systems; the cut-off of further production of fissionable material for weapons purposes and the transfer of stocks of such material to peaceful uses; the restriction or prohibition of the deployment of nuclear weapons on the territory of other States; the freezing of nuclear-weapons arsenals; the non-use or no-first-use of nuclear weapons; nuclear-weapon-free zones; and the non-proliferation of nuclear weapons. Two more items dealing with nuclear weapons - a comprehensive nuclear-test ban and security assurances for non-nuclear-weapon States - are discussed in separate papers, as noted in paragraph 1 above.

19. Prospects for agreement on the cessation of the further production of fissionable material for weapons purposes, on which proposals have been made at various times and in various forums, in particular by Canada, 3/ have lately increased considerably. In July 1992, the United States, announced that it would not produce any more plutonium or highly enriched uranium. In 1993, the United States declared its readiness to seek a ban on the production of fissile material for weapons purposes. Following the cessation of the production of enriched uranium by the former Soviet Union in 1989, the Russian Federation continues to carry out the programme for halting the production of weapon-grade plutonium and has declared that it will shut down industrial reactors for the production of weapon-grade plutonium by the year 2000. As a result of these developments, in 1993, for the first time, the General Assembly resolution on the cut-off proposal was adopted by consensus. 4/ In that resolution, the Assembly recommended the negotiation in the most appropriate international forum of a non-discriminatory, multilateral and internationally and effectively verifiable treaty banning the production of fissile material for nuclear weapons or other nuclear explosive devices.

20. In 1994, the Conference on Disarmament appointed a special coordinator to conduct consultations on the question of negotiating a treaty banning the production of fissile material for nuclear weapons or other explosive devices. While there seems to be general agreement that the Conference would be the appropriate forum for such negotiations, no agreement has yet been reached on a mandate for an ad hoc Committee to negotiate such a treaty.

2. Bilateral United States-Soviet Union/Russian Federation negotiations on nuclear arms limitation and disarmament

21. Through bilateral negotiations on nuclear arms limitation, disarmament and related matters, the former Soviet Union/Russian Federation and the United States have over the years reached a number of agreements (see para. 9). On 31 July 1991, the Treaty between the United States of America and the Union of Soviet Socialist Republics on the Reduction and Limitation of Strategic Offensive Arms (START I) was signed at Moscow. The START Treaty provides for significant reductions and imposes limits on all elements of the strategic nuclear forces. The United States, by May 1994, had removed over 3,500 nuclear warheads from over 780 intercontinental and submarine-launched ballistic missiles and within the following month intended to take all warheads off its ballistic missiles whose launchers would be eliminated under the Treaty.

22. Following the dissolution of the Soviet Union in late 1991, its nuclear arsenal passed into the jurisdiction of four newly formed States: Belarus, Kazakhstan, the Russian Federation and Ukraine. These four States and the United States signed, in May 1992 at Lisbon, a Protocol to the START I Treaty by which Belarus, Kazakhstan, the Russian Federation and Ukraine, as successor States of the former Soviet Union assumed the obligations of the former Union of Soviet Socialist Republics under the Treaty. Furthermore, Belarus, Kazakhstan and Ukraine committed themselves to adhere to the Non-Proliferation Treaty as non-nuclear weapon States in the shortest possible time. Belarus acceded to the Treaty in August 1993 and Kazakhstan in February 1994. Although all four States have ratified the START I Treaty, Ukraine initially raised a number of conditions and reservations. In January 1994, the United States, the Russian Federation and Ukraine agreed that all the strategic weapons stationed in Ukraine would be turned over to the Russian Federation for dismantling in exchange for security assurances and compensation in the form of nuclear fuel for its nuclear power industry. Ukraine reiterated its commitment to accede to the Non-Proliferation Treaty as a non-nuclear-weapon State in the shortest time possible and, in February 1994, withdrew its reservation concerning article V of the Lisbon Protocol. 5/ By May 1994, 180 nuclear warheads had been transferred from Ukraine to the Russian Federation for dismantlement.

23. As a result of negotiations between the Russian Federation and the United States on further reductions of strategic weapons, the Treaty on Further Reduction and Limitation of Strategic Offensive Arms (START II) was signed at Washington in January 1993. The Treaty envisages two phases of reductions. In the first phase, which will be completed within seven years of the Treaty's entry into force, each side will reduce and limit its strategic forces to between 3,800 and 4,250 warheads. In the second phase, which will be completed by the year 2003, or earlier subject to financial resources needed by the Russian Federation for the destruction of those warheads, each side will reduce its overall totals to between 3,000 and 3,500 warheads. All long-range, land-based missiles with multiple nuclear warheads will be banned. The overall reductions would represent approximately 70 per cent of the strategic arsenals over the next decade. The START II Treaty contains the provision that it will enter into force not prior to the entry into force of START I.

24. In accordance with the 1987 INF Treaty, the Soviet and United States intermediate-range and shorter-range missiles, i.e., ballistic missiles and ground-launched cruise missiles of "intermediate range" (1,000 to 5,500 kilometres) and of "shorter range" (500 to 1,000 kilometres) were eliminated. The elimination of 859 United States and 1,752 Soviet missiles involved about 4 per cent of the arsenals of the two nuclear Powers. With the completion of the process in May 1991, an entire class of nuclear weapons was eliminated from the arsenals of the two major Powers. In this sense, the INF Treaty represented the first real nuclear disarmament agreement.

25. Over the years, the United States and the former Soviet Union/Russian Federation have concluded several agreements aimed at improving direct communication links and at reducing the risk of accidental or unintended nuclear war. Both sides established nuclear risk reduction centres in their respective capitals. In addition, a number of unilateral measures were undertaken by both States as part of a "cooperative denuclearization process". By October 1991 the United States had reportedly withdrawn its sea-launched tactical nuclear weapons and forward-deployed tactical nuclear weapons from Asia, and by July 1992 from Europe. Up until May 1992, the Russian Federation had relocated all tactical nuclear munitions from Eastern Europe as well as from the non-Russian territories of the Commonwealth of Independent States. The Russian Federation and the United States also removed their strategic bombers from alert posture, and in May 1994 de-targeted their strategic missiles, so that they were no longer aimed at each other's territories. A similar agreement was reached between Russia and the United Kingdom of Great Britain and Northern Ireland, and has been carried out. At the same time, the United Kingdom and France have taken measures to reduce their nuclear force levels and to scale down their respective nuclear weapon programmes. In 1991, the United Kingdom announced that its naval ships would no longer carry nuclear weapons in normal circumstances. In 1993, it announced that its sub-strategic nuclear bomb would not be replaced when it goes out of service early in the next century. The United Kingdom has also reduced its strategic nuclear forces such that the total explosive power of the its operational nuclear arsenal is set to fall by 25 per cent compared with the 1990 level.

B. Measures and initiatives relating to general and complete disarmament

1. General and complete disarmament

26. In the early 1990s serious consideration was given to the best way on how to further pursue this goal under the changed international situation in the post-cold war era. The Conference on Disarmament continued to consider the question in plenary under the item "Comprehensive Programme of Disarmament" without, however, being able to reach any specific agreement on how to proceed. General and complete disarmament, however, remains the ultimate goal of the United Nations disarmament efforts.

2. Bacteriological (biological) weapons

27. Efforts of the international community in this field largely focused on the further strengthening of the 1972 Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction. The Third Review Conference of the parties to the Convention, held in 1991, decided to begin its work with a view to strengthening the provisions of the Convention. An Ad Hoc Group of Governmental Experts of States Parties to the Convention was established to identify and examine potential verification measures from a scientific and technical standpoint. The Group, in September 1993, adopted a report, in which 21 potential measures were identified which would contribute to strengthening the effectiveness and improving the implementation of the Convention. A Special Conference to consider these proposals will be convened at Geneva from 19 to 30 September 1994.

3. Chemical weapons

28. After more than 20 years of negotiations, the Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction was concluded in the Conference on Disarmament in September 1992. The same year, the General Assembly adopted without a vote resolution 47/39 of 30 November 1992, in which it commended the Convention and requested the Secretary-General, in his capacity as depositary, to open it for signature. One hundred thirty States signed the Convention during the signing ceremony held in Paris from 13 to 15 January 1993. By the end of May 1994, 157 States had signed the Convention, which will come into force on 13 January 1995 if, by that time, at least 65 States have ratified it.

29. The Chemical Weapons Convention is the first global, comprehensive and verifiable multilateral disarmament agreement which provides for the elimination of an entire category of weapons of mass destruction. After the entry into force of the Convention, the Organization for the Prohibition of Chemical Weapons will be established to ensure its effective implementation. In order to develop appropriate procedures both to provide a basis for the future organization and to assist States in their own preparations, the Preparatory Commission for the Organization was established on 8 February 1993 at The Hague.

30. The multilateral negotiations on the Convention were greatly influenced by the progress in the bilateral negotiations between the former Soviet Union and the United States. In 1990, those States signed an Agreement on the Destruction and Non-Production of Chemical Weapons to Facilitate the Multilateral Convention on Banning Chemical Weapons. In June 1992, the United States and the Russian Federation entered into a weapons destruction and non-proliferation agreement which, inter alia, provides for assistance to the Russian Federation in achieving the destruction of nuclear, chemical and other weapons; the safe and secure transportation and storage of such weapons in connection with their destruction; and the establishment of additional verification measures against the proliferation of such weapons that pose a risk of proliferation. 6/ To accomplish those objectives with regard to chemical weapons, the United States and the Russian Federation in July 1992 concluded the Agreement on Chemical

Weapons Destruction. 7/ At their summit meeting in January 1994, both States, reaffirmed their desire to facilitate the safe, secure, timely and ecologically sound destruction of their chemical weapons. 8/

31. Efforts of the members of the so-called Australia Group, which first met in 1985, have continued with a view to helping to prevent the spread of chemical and biological weapons through controls of chemical precursors, biological organisms and toxins and equipment which might have uses for chemical, biological and toxin weapons. In connection with the conclusion of the negotiations on the Chemical Weapons Convention in August 1992, the members of the Australia Group issued a statement underlining their readiness "to review in the light of the implementation of the Convention, the measures that they take to prevent the spread of chemical substances and equipment for purposes contrary to the objectives of the Convention, with the aim of removing such measures for the benefit of States parties to the Convention acting in full compliance with their obligations under the Convention". 9/

4. Other weapons of mass destruction

32. The issue of new weapons of mass destruction has long been under consideration within the framework of the United Nations. Attention was given to the prevention of the emergence of new types of weapons of mass destruction based on new scientific principles and achievements besides the existing atomic, biological and chemical weapons. It has not been possible so far, however, to find generally acceptable criteria for the identification of such weapons. As a result both the General Assembly and the Conference on Disarmament have tended to focus on prohibitions of specific categories of weapons, in particular radiological weapons. 10/

33. The Conference on Disarmament has continued to consider the question of a convention for the prohibition of radiological weapons. Until 1992, the negotiations took place in an Ad Hoc Committee set up for that purpose. Consideration focused on two aspects: (a) the prohibition of radiological weapons in the traditional sense, and (b) the prohibition of attacks against nuclear facilities. It has not been possible so far to find ways of dealing with both aspects in a single instrument, and little progress was made with regard to either of these elements. The Ad Hoc Committee was not re-established in 1993 and 1994 and the issue has been dealt with in plenary meetings only. The General Assembly in 1993 requested the Conference on Disarmament to keep the question under review, with expert assistance, as appropriate.

5. Science and technology

New scientific and technological developments; advanced technologies

34. Considerable attention continues to be given to the question of modern military technology and its impact on international security. However, the differences in approach to the subject remain much the same as before. Whereas the industrialized countries tend to emphasize the positive effects of science and technology, many developing countries express concern about the possible

negative impact of its military application. Both approaches are reflected in resolutions annually adopted by the General Assembly and efforts to merge the two drafts have so far been unsuccessful. 11/ In 1990 and 1993, the Secretary-General submitted reports, 12/ on the subject to the General Assembly, and since 1991 the Disarmament Commission has considered the item entitled "The role of science and technology in the context of international security, disarmament and other related fields". Consideration of the item was scheduled for completion in 1994. Although considerable progress had been made, the Commission was not able to reach consensus on a set of guidelines and recommendations during its 1994 session.

Missile Technology Control Regime

35. In recent years, not only sophisticated and high-technology weapons, but also the military technology and operational know-how involved have been the subject of international transfers. In reaction to that trend, the idea has emerged to complement the existing restraints on supplies of nuclear material and equipment by restraints on supplies of dual-capable systems, i.e., systems capable of delivering both conventional and nuclear weapons. However, this idea has not been generally accepted. Many developing countries take the view that such restrictions are discriminatory and fear that they may adversely affect their economic development. Most industrialized countries, on the other hand, maintain that there is a need to strengthen the existing control regimes involving the transfer of science and technology which could be used for military purposes. The guidelines for sensitive missile-relevant transfers adopted by a group of supplier States 13/ in April 1987, the Missile Technology Control Regime, had the declared objective of limiting the risk of proliferation of weapons of mass destruction by controlling transfers that could make a contribution to delivery systems. The rules limit the export of ballistic missiles with range of at least 300 kilometres and a payload of at least 500 kilograms. The regime, originally meant to control only transfers of equipment and technology which could make a contribution to missile systems capable of delivering nuclear weapons, 14/ was amended in July 1992 to cover also missiles capable of delivering biological and chemical weapons.

6. Prevention of an arms race in outer space

36. As in previous years, the prevention of an arms race in outer space continued to receive attention in the multilateral forums. The General Assembly has each year adopted resolutions on the subject and the Conference on Disarmament considered the subject in an Ad Hoc Committee. So far, basically two approaches have been discussed: amending the existing agreements, i.e., the Outer Space Treaty, which only covers weapons of mass destruction, or drafting new agreements. Most developing States support negotiations on a comprehensive international instrument to prevent an arms race in outer space. Others do not see a need for multilateral negotiations. Studies on the application of confidence-building measures in outer space 15/ and on international cooperation in space activities for enhancing security in the post-cold war era 16/ were submitted by the Secretary-General to the General Assembly in 1993. In the same year, in the Conference on Disarmament, growing interest was evinced in negotiating confidence-building measures as an intermediate step towards the

goal of achieving a safe and stable regime in outer space. The discussions moved closer to a convergence of views on the desirability of elaborating measures designed to strengthen transparency, confidence and security in outer space affairs. There were suggestions that specific confidence-building measures such as the exchange of information on planned and actual space activities, the establishment of an international notification centre and the development of a code of conduct could form an integral part of the overall goal of preventing an arms race in outer space.

7. Arms limitation and disarmament measures relating to the environment and to the sea

37. The Second Review Conference of the Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques was held in 1992. In the Final Declaration, adopted by consensus, the Conference reaffirmed the strong common interest of the States parties in preventing the use of environmental modification techniques for military or any other hostile purposes and confirmed that the obligations assumed under the ENMOD Convention had been faithfully observed. An understanding was reached that military or any other hostile use of herbicides as an environmental modification technique was a method of warfare prohibited by the Convention if such use of herbicides upset the ecological balance of the region, thus causing widespread, long-lasting or severe effects as a means of destruction, damage or injury to any State party. The Conference also stressed that due attention should be given to all relevant research, developments and new techniques in the fields of science and technology.

38. The Third Review Conference of the Treaty on the Prohibition of the Emplacement of Nuclear Weapons and Other Weapons of Mass Destruction on the Seabed and the Ocean Floor and in the Subsoil Thereof, held in 1989, requested the Secretary-General to report at three-year intervals on developments relevant to the Seabed Treaty and on verification of compliance with its provisions. Pursuant to that request, the Secretary-General in 1992 submitted a report to the General Assembly transmitting replies from Governments regarding technological developments relevant to the Treaty. 17/ A Fourth Review Conference is due to be held not earlier than 1996.

8. Limitation and reduction of conventional weapons and arms transfers on a world-wide and regional basis

Conventional disarmament

39. Traditionally, in the deliberations on disarmament within the framework of the United Nations, more consideration tended to be given to issues relating to weapons of mass destruction than to the question of conventional armaments. Most recently, since the beginning of the reduction in nuclear weapons and with a growing number of armed conflicts involving conventional weapons, there has been an increased awareness of the need to address conventional disarmament as well. In 1990, the Disarmament Commission adopted by consensus a text in which it identified a number of issues and possible measures in the field of

conventional arms reductions and disarmament. As a result of the crisis and war in the Persian Gulf in 1991, the trend towards increased emphasis on conventional armaments and, consequently, conventional disarmament was further strengthened. The General Assembly has adopted many resolutions and decisions on various aspects of the conventional arms race and conventional disarmament. Discussion at the United Nations focused on issues such as limitations on conventional weapons; transparency in international arms transfers and arms production; transparency in military expenditures; inhumane weapons and the Convention restricting their use; and, recently, regulation of the transfer of technology with military applications.

Register of Conventional Arms

40. It has long been recognized that transfers of conventional weapons have immediate implications for any efforts to reduce such weapons. Attempts to limit that trade may not receive universal support, however. Developing States that do not have indigenous production of conventional weapons have always emphasized the need to import arms to meet their perceived security needs. The Persian Gulf conflict in 1990-1991 is widely seen as having contributed to the view that the accumulation of advanced conventional weaponry can play a major role in causing or aggravating regional armed conflicts and as such may constitute an important threat to international stability. Accordingly, there have been numerous proposals recently for the development of a multilateral mechanism to regulate the transfer of conventional weapons.

41. In order to create the conditions of greater confidence among States in international relations, an increased emphasis has begun to be placed on the need to ensure greater transparency with regard to arms transfers as the first minimal step that could be taken in that respect. In this connection in 1991, the United Nations Register of Conventional Arms was established as a voluntary confidence-building measure. It was put into operation on 1 January 1992. In April 1993, Member States for the first time began voluntarily to submit data on arms transfers in seven categories of conventional arms as well as available background information regarding military holdings, procurement through national production and relevant policies for the calendar year 1992. The Register is intended to be global in nature, compiling information voluntarily submitted by Member States. It is aimed at promoting a readiness to exercise restraint in the process of accumulating arms and is regarded as having the potential to be an effective instrument of preventive diplomacy. The Governments of 87 countries submitted replies in 1993 for the calendar year 1992. In 1994, a Group of Governmental Experts was established to review the continuing operation of the Register and its further development. One of the issues the Group is considering is the addition of further categories of equipment and the elaboration of the Register to include military holdings and procurement through national production. The report of the Expert Group is to be submitted to the General Assembly at its forty-ninth session in 1994.

Prohibition or restrictions of use of certain conventional weapons which may be deemed to be excessively injurious or to have indiscriminate effects

42. The Inhumane Weapons Convention of 1981, to which are annexed three Protocols on specific types of weapons, bans or curbs the use of certain

categories of weapons. In the last few years there have been many cases in which weapons prohibited by the Convention were used against civilians in conflicts around the world. Thus, for instance, although Protocol II to the Convention prohibits or restricts the use of mines, booby traps and other devices, there are millions of mines scattered throughout the world in present or former conflict areas. Several States have called for an investigation of the alleged violations as well as for the convening of a review conference or an amendment conference, as provided for in the Convention. Specifically, States have called for a strengthening of the Convention in regard to land-mines, to provide for a verification mechanism and to ensure that land-mines are manufactured in such a manner as to be detectable and that they are endowed with a self-destructive capacity once hostilities cease. Upon the request of France, the Secretary-General of the United Nations, as the depositary of the Convention, has established a Group of Governmental Experts to prepare a Review Conference to be held in 1995. Two sessions have already taken place in 1994 (February/March and May) and a third session is to be held in August.

43. The increasing concern over the use of anti-personnel mines led to the adoption by consensus by the General Assembly at its forty-eighth session, in 1993, of resolution 48/75 K of 16 December 1993 on a moratorium on the export of such weapons. At the same session, the Assembly also adopted resolution 48/7 of 19 October on assistance in mine clearance, in which it welcomed the establishment, within the Secretariat, of a coordinated mine-clearance programme, deplored the adverse consequences of the failure to remove mines and other unexploded devices, and requested the Secretary-General to report on the problems involved, including the financial aspects.

Regional limitation and reduction of armed forces and of conventional weapons

44. During the period under review, the States of Central America continued their efforts to establish a firm and lasting peace in the subregion. Building upon the basis laid down by the Esquipulas I and II agreements, 18/ the Presidents of Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua in December 1990 declared Central America to be a region of peace, freedom, democracy and development. 19/ Negotiations were undertaken within a Security Commission, which also reached agreement on a new security model based on coordination, communication and prevention, confidence-building between the States of the region and control and limitation of arms and military personnel.

45. The General Assembly of the Organization of American States (OAS) in 1992 adopted a resolution by which it accepted as a guiding principle of regional disarmament, arms control and limitation policies the requirement to enhance security and stability at the lowest possible level of forces consistent with defence requirements and international commitments. 20/ In 1993, the General Assembly of OAS agreed to undertake a work programme that would include, inter alia, global and regional disarmament and arms control; the relationship between development, environment and disarmament; the promotion of openness and transparency in the transfer of conventional weapons, including the provision of information to registers on conventional weapons and exchanges of information on national policies; and the consideration of measures to promote confidence and transparency.

46. Negotiations on conventional armed forces in Europe started in 1989 in Vie a between NATO and the then Warsaw Treaty Organization. They were successfully concluded in November 1990 with the signing of the Treaty on Conventional Armed Forces in Europe (the CFE Treaty) by the 22 States participating in the talks. For the two groups of States (NATO member States and WTO member States), as defined by the Treaty, the Treaty establishes equal total ceilings for certain items of land-based military equipment. Collectively, the countries of each of the two groups of States, which are parties to the Treaty, may hold in Europe up to 20,000 battle tanks, 30,000 armoured combat vehicles, 20,000 pieces of artillery, 6,800 combat aircraft and 2,000 combat helicopters. The Treaty aims at establishing a secure and stable balance of conventional armed forces in Europe at lower levels, eliminating the disparities threatening stability and security and also eliminating, as a matter of high priority, the capability for launching surprise attacks and for initiating large-scale offensive action in Europe. Negotiations were subsequently held on a follow-on agreement on the personnel strength of conventional armed forces in Europe. An agreement setting out limits on personnel levels decided upon by each party (NATO and former WTO members or their successor States) and providing for exchanges of information on such forces was concluded in July 1992. Both Treaties entered into force in July 1992. The reductions agreed upon are being carried out in phases and, by 1995, national levels must be below the declared limits.

9. Confidence-building measures/transparency in armaments

Conference on Security and Cooperation in Europe

47. The issue of confidence- and security-building measures was first discussed by the Conference on Security and Cooperation in Europe (CSCE). Having adopted the Helsinki Final Act in 1975, the original 35 participating States held major follow-up meetings at Belgrade, Madrid, Vienna and Helsinki. In November 1990, a new set of 16 mutually complementary confidence- and security-building measures designed to reduce the risk of military confrontation in Europe was signed at Vienna. A comprehensive document was adopted in 1992, which introduced more detailed measures relating to exchanging information, providing advance notice of military exercises, and limiting those exercises. At the Helsinki summit meeting, in July 1992, the 52 participating States of CSCE, including the successor States of the former Soviet Union, adopted the "Helsinki Document 1992 - The Challenge of Change". They decided to strengthen the CSCE institutions and structures, and to begin new negotiations on arms control, disarmament and confidence- and security-building. A new CSCE Forum for Security Cooperation was established at Vienna, with a strengthened Conflict Prevention Centre, as an integral part of CSCE.

48. At its meeting in January 1993, the Forum focused on European armed conflicts, including those in Armenia, Azerbaijan, Georgia, the Republic of Moldova and the former Yugoslavia. The Forum also considered a number of other questions, i.e., harmonization of arms control obligations, code of conduct in military matters, global exchange of military information, non-proliferation of weapons, conventional arms transfers, information exchange on defence planning and military contacts. Significant discussions were also held with regard to

the implementation of confidence- and security-building measures. The next CSCE Review Conference will meet at Budapest from 10 October to 2 December 1994.

Objective information on military matters and transparency in armaments

49. Convinced that objective information and greater openness with respect to military activities would contribute to a greater degree of confidence among States, the various disarmament bodies in the framework of the United Nations have in recent years paid increasing attention to that issue. The General Assembly has recommended a variety of ways to promote transparency in armaments as part of the general process of confidence-building. The Disarmament Commission in 1992 adopted by consensus a set of guidelines and recommendations for objective information on military matters, 21/ which were endorsed unanimously by the General Assembly in its resolution 47/54 B of 9 December 1992. The guidelines stated that openness and transparency help to build confidence, relax tensions and promote agreements on other measures of disarmament.

50. Also in 1992, the Conference on Disarmament began to address the issue of transparency in armaments. An Ad Hoc Committee was established in 1993 and is continuing its work in 1994. The Committee examines various proposals for improving transparency and openness in military matters and for augmenting the United Nations Register of Conventional Arms (see paras. 40-41 above). It also discusses ways to increase openness and transparency with respect to excessive and destabilizing accumulations of arms, to military holdings and procurement through national production and to transfers of high technology with military applications and of weapons of mass destruction.

Treaty on Open Skies

51. The Treaty on Open Skies was signed at Helsinki on 24 March 1992 by Canada, the United States and 23 European States. The aim of the Treaty, which creates an open skies regime over the territory from Vancouver, Canada to Vladivostok, Russian Federation, is to develop greater openness and transparency by opening the airspace over the signatory States to flights by unarmed surveillance aircraft. The agreement facilitates the monitoring of compliance with existing or future arms control agreements and confidence-building measures. An Open Skies Consultative Commission was established at Vienna with the mandate to oversee the implementation and operation of the Treaty. The agreement is of unlimited duration and will enter into force 60 days after the deposit of 20 instruments of ratification. Three years after entry into force and at five-year intervals thereafter, review conferences will take place.

10. Economic aspects of disarmament

52. The possibility of reducing the huge financial, material and human resources devoted to the military sector and reallocating part of them to the civilian sector of national economies has been the object of deliberations within the framework of the United Nations for over three decades. In the post-cold war era, however, the possibility of reallocating resources from the military to the civilian sector has received the renewed attention of the

international community. Another issue of growing relevance is that of the economic costs of disarmament. Now that some significant arms reductions are actually taking place, many States are facing unforeseen costs relating to the safe physical dismantling and destruction of weapons or their storage, to the prevention of related environmental hazards and to measures of verification of disarmament agreements. The main finding of a report on economic aspects of disarmament prepared by the United Nations Institute for Disarmament Research (UNIDIR) in 1992 22/ was that disarmament has major economic consequences involving short-term costs as well as long-term benefits.

53. With the prospects of significant reductions in armed forces and armaments in the 1990s, the issue of the "peace dividend" has drawn considerable attention. Since the beginning of the decade the world-wide trend in military spending has been downward. However, the improved political environment has not yet had a major impact on military budgets and, so far, hopes for a massive peace dividend for productive and development-oriented needs have not yet materialized. Recently, efforts were renewed to achieve wider participation in the voluntary system for standardized reporting on military expenditures in which, in 1980, the General Assembly had recommended that Member States take part. 23/ Since then, the Secretary-General has submitted annually standardized reports to the General Assembly containing information provided by Member States with regard to their military expenditure. So far only a limited number of States (approximately 30) have participated in the reporting system. In 1993, the General Assembly, in its resolution 48/62 of 16 December 1993, which was adopted without a vote, requested the Secretary-General to seek the views of Member States on ways and means to strengthen and to broaden participation in the reporting system.

54. In recent years, in the light of the momentous changes in the political environment, the issue of conversion has gained new prominence. An expert study on the potential uses of military-related resources for protection of the environment was submitted to the General Assembly in 1991. Conferences on conversion and related subjects were held in Moscow in 1990 and 1992; in Beijing in 1991; in Dortmund, Germany, and in Washington in 1992; and in Hong Kong in 1993. Lately there has been increasing support for governmental action in the area where disarmament and development meet, that is, in conversion. It is widely felt that international cooperation, exchanges and research in support of military-to-civilian conversion should be expanded; that multilateral and private financial institutions should address the funding requirement of conversion; and that information is a crucial resource in the conversion process. The Secretary-General regularly reports on specific activities concerning the relationship between disarmament and development which are undertaken in accordance with requests made by the international conference on the subject that was held in 1987. In 1993, the Secretary-General requested the United Nations Conference on Trade and Development (UNCTAD) to coordinate the establishment of a United Nations interdepartmental task force on conversion and to prepare a preliminary proposal for its organization and programme of work. 24/

Notes

1/ Article VI of the Treaty reads as follows:

"Each of the Parties to the Treaty undertakes to pursue negotiations in good faith on effective measures relating to cessation of the nuclear-arms race at an early date and to nuclear disarmament, and on a treaty on general and complete disarmament under strict and effective international control."

2/ The resolutions were adopted with the following voting results: 45/59 B (125 to 17, with 10 abstentions); 46/37 D (122-16-22); 47/53 C (126-21-21); and 48/76 B (120-23-24).

3/ For details see NPT/CONF.III/5 and NPT/CONF.IV/5.

4/ General Assembly resolution 48/75 L.

5/ A/49/69-S/1994/117.

6/ CD/1162.

7/ CD/1161.

8/ The United States promised to provide $30 million in assistance to support an analytical chemical laboratory in the Russian Federation to facilitate chemical weapons destruction and agreed to consider appropriate additional measures to support the Russian Federation's chemical weapons destruction programme.

9/ CD/1164.

10/ Radiological weapons are devices containing radioactive substances, which are dispersed by conventional explosives.

11/ General Assembly resolution 48/61.

12/ A/45/568 and A/48/360.

13/ The original members were Canada, France, the Federal Republic of Germany, Italy, Japan, the United Kingdom and the United States. Subsequently Australia, Austria, Belgium, Denmark, Finland, Greece, Iceland, Ireland, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden and Switzerland joined. At the Interlaken meeting, held from 29 November to 2 December 1993, Argentina and Hungary participated, bringing to 25 the number of MTCR members.

14/ The rules limit the export of ballistic missiles with range of at least 300 kilometres and a payload of at least 500 kilograms.

15/ A/48/305 and Corr.1.

16/ A/48/221.

17/ A/47/362.

18/ For details, see NPT/CONF.IV/5, para. 136.

19/ Declaration of Puntarenas (A/45/906-S/22032, annex).

20/ AG/RES.1179 (XXII-0/92).

21/ Official Records of the General Assembly, Forty-seventh Session, Supplement No. 42 (A/47/42), annex I.

22/ A/47/346.

23/ General Assembly resolution 35/142 B, para. 2.

24/ A/48/400, para. 3.